

REMARKS

In the present Amendment, claims 18 and 40-42 are amended and new claims 43-47 are added. By the present Amendment, claims 18-33 and 40-47 are pending in the present application.

Claims 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Fischell (USP 4,731,051). In addition, claims 40-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Thompson (USP 6,167,303, erroneously identified in the Office Action as USP 6,167,203). These rejections are respectfully traversed, in view of the claims as amended herein.

In particular, claim 40, as amended herein, is patentably distinguished over each of the Fischell reference and the Thompson reference cited above. For example, claim 40 recites a method of conserving power in a medical system having an ambulatory medical device (MD), for delivering a substance to a body of a patient or for monitoring the body of the patient, with at least one MD processor having a plurality of MD functional modules, the method comprising the steps of: storing control data associated with a plurality of functional modules of the MD, the MD processor operable with the control data to selectively enable or disable clock signals used by at least one functional module of the plurality of functional modules in the MD; enabling clock signals used by at least one of the MD functional modules when the at least one module is needed for operation of the medical device; and disabling clock signals used by the at least one MD functional module when the module is not needed for operation of the medical device, while the clock signal for at least one other MD functional module is enabled.

Neither Fischell nor Thompson describe or suggest a method as recited in claim 40, including storing control data associated with a plurality of functional modules of the MD, the MD processor operable with the control data to selectively enable or disable clock signals used by at least one functional module of the plurality of functional modules in the MD. Instead, Fischell describes an idle state that is used to conserve power during shipping or storage and to reset the controller. While in the idle state, Fischell's controller circuit is dormant to conserve power and clock pulses to the controller are suppressed. In the idle state, Fischell's controller is reset (block 103) to establish initial conditions and then waits (block 104). Insofar as the

Examiner is citing Fischell's controller circuit as one functional module (to which clock signals are enabled or disabled), Fischell neither describes nor suggests "storing control data associated with a plurality of functional modules of the MD." (underline added for emphasis.)

In addition, because Fischell teaches to disable clock signals to the controller to place the system into an idle state for shipping, storing or re-setting, the disablement of the clock signal to the controller will not coincide with an enablement of a clock signal to at least one other functional module. Accordingly, Fischell neither describes nor suggests "disabling clock signals used by the at least one MD functional module when the module is not needed for operation of the medical device, while the clock signal for at least one other MD functional module is enabled." (underline added for emphasis.)

While Thompson describes a system in which a data monitor measures signals that are input to the medical device, before the signals are provided to a main signal processor. In response to the measuring, the data monitor controls a clock circuit to increase or decrease a clock frequency, for improved power consumption efficiency. However, Thompson neither describes nor suggests "storing control data associated with a plurality of functional modules of the MD, the MD processor operable with the control data to selectively enable or disable clock signals used by at least one functional module of the plurality of functional modules in the MD."

Accordingly, as amended, claim 40 is patentably distinguished over the Fischell reference and the Thompson reference. Claims 41 and 42 are each dependent (directly or indirectly) on claim 40. Therefore, at least for reasons as noted above with respect to claim 40, it is submitted that claims 41 and 42 are also patentably distinguished over the Fischell reference and the Thompson reference. The rejection of claims 40-42 is respectfully traversed.

In addition, new claims 43 and 44 are added (each of which are dependent on claim 40 and are believed to be further distinguished from the references of record). In particular, claim 43 recites the method of claim 40, wherein storing control data comprises providing a clock enable control register to which enablement and disablement settings for each of a plurality of MD functional modules are bit mapped. As noted above, neither Fischell nor Thompson describe or suggest storing control data associated with a plurality of functional modules of the MD, where the MD processor operable with the control data to selectively enable or disable

clock signals used by at least one functional module of the plurality of functional modules in the MD. In addition, neither Fischell nor Thompson describe or suggest providing a clock enable control register to which enablement or disablement settings for each functional module are bit mapped. Accordingly, the subject matter of new claim 43 is believed to be further distinguished from the Fischell and Thompson references.

Furthermore, claim 44 recites the method of claim 43, wherein the MD functional modules include at least one of a first synchronous serial port, a second synchronous serial port, an analog-to-digital converter and an infusion pump circuit. As discussed above, Fischell describes an idle mode in which a controller is disabled, while Thompson describes selectively controlling high frequency clock signals. Neither Fischell nor Thompson describe or suggest enabling or disabling clock signals for first synchronous serial port, a second synchronous serial port, an analog-to-digital converter and an infusion pump circuit. Accordingly, the subject matter of new claim 44 is believed to be further distinguished from the Fischell and Thompson references.

Support for the amendments to claim 40 and for new claims 43 and 44 is found in the original patent specification, for example, but not limited to, paragraphs 0276 and 0304. Accordingly, no new matter has been added to the specification, by those claim amendments and new claims.

Claims 18-20, 23, 24, 29 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Stanton (USP 6,249,703). In view of claim 18, as amended herein, this rejection is respectfully traversed.

As amended, claim 34 recites a medical system, comprising: an ambulatory medical device (MD) comprising MD electronic control circuitry that further comprises at least one MD telemetry system and at least one MD processor that controls, at least in part, operation of the MD telemetry system and operation of the medical device, wherein the medical device is configured to provide a treatment to a body of a patient or to monitor a selected state of the body; and a communication device (CD) comprising CD electronic control circuitry that further comprises at least one CD telemetry system and at least one CD processor that controls, at least in part, operation of the CD telemetry system and operation of the communication device,

wherein the CD telemetry system sends messages to or receives messages from the MD telemetry system, wherein the communication device is configured to receive status information on an MD battery via telemetry from the medical device and wherein the communication device is further configured to display a log of plural battery level readings over a period of time.

A medical system as recited in amended claim 18 is neither described nor suggested by Stanton et al. For example, Stanton describes a system in which a patient programmer unit 10 includes LEDs that are activated to identify certain alarm conditions, including a low or depleted battery in an associated implanted device. More specifically, Stanton et al. teach that LED 38 and LED 36 are lit to indicate a good respective battery. Those LEDs are controlled to blink, if the respective battery is low and to remain off if the battery is out of life. (Stanton, col. 15, ll. 2-6.) The lighting or blinking of an LED is not a display of a log of plural battery level readings over a period of time. Furthermore, the lighting or blinking of an LED would not have suggested to one of ordinary skill in the art to display of a log of plural battery level readings over a period of time. Therefore, claim 18, as amended, is patentably distinguished over Stanton et al.

Claims 19, 20, 23, 24, 29 and 33 are each dependent (directly or indirectly) on claim 18. Accordingly, at least for reasons discussed above with respect to claim 18, it is submitted that each of claims 19, 20, 23, 24, 29 and 33 is patentably distinguished over the references of record.

Claims 27 and 28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton in view of Ogden (USP 6,070,103). This rejection is respectfully traversed. In particular, the Ogden reference does not address the above-noted distinctions between parent claim 18 and the Stanton reference. Claims 27 and 28 are each dependent on claim 18. Ogden was cited by the Examiner for a disclosure relating to rechargeable or non-rechargeable batteries. Ogden relates to a system for recharging a battery in an implanted device. The rejection of claims 27 and 28 is, therefore, respectfully traversed, at least for reasons as discussed above with respect to claim 18.

Claims 31 and 32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton. This rejection is respectfully traversed. Claims 31 and 32 are each dependent, indirectly, on claim 18. The rejection of claims 31 and 32 is, therefore, respectfully traversed, at least for reasons as discussed above with respect to claim 18.

Claims 21, 22, 25 and 26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton in view of Renirie et al. (USP 5,369,364). This rejection is respectfully traversed. In particular, the Renirie et al. reference does not address the above-noted distinctions between parent claim 18 and the Stanton reference. Renirie et al. was cited by the Examiner as describing testing a battery voltage against different impedances. Claims 21, 22, 25 and 26 are each dependent on claim 18. The rejection of claims 21, 22, 25 and 26 is, therefore, respectfully traversed, at least for reasons as discussed above with respect to claim 18.

In addition, new claims 45-47 are added and depend, directly or indirectly, on claim 18. New claims 45-47 are further distinguished over the references of record. In particular, new claim 45 recites the system of claim 18, wherein the MD has a battery and the system is configured to provide a first voltage reading from the MD battery when the MD battery is powering a first load and to provide a second voltage reading from the MD battery when the MD battery is powering a second load that is different from the first load. It is noted that, in the Renirie patent, a test is conducted (during manufacture) with the resistor R_K connected as a load to provide V_K and a further test is conducted with an open circuit (i.e., no load being driven), to provide V_{OC} . The test with the open circuit does not involve powering a load (because the open circuit will, inherently, inhibit powering of a load). Accordingly, the subject matter of claim 45 is further distinguished from the references of record.

Also, new claim 46 is dependent on claim 45 and recites that at least one of the first and second loads is provided by turning on at least one selected electrical component in the MD. As noted above, Renirie describes conducting a test during manufacture to calculate the internal impedance of a battery, when a load resistor R_K is connected across the battery and when the battery circuit is open. However, the connection of a load resistor R_K for tests during manufacturing does not describe or suggest turning on at least one selected component in a medical device to provide a test load. Accordingly, the subject matter of claim 46 is further distinguished from the references of record.

New claim 47 is dependent on claim 18 and recites that the CD comprises a display configured to show at least one of the most recently logged battery voltages and further includes a user-controlled actuator configured to cause the display to show older logged battery voltage

entries upon actuation of the user-controlled actuator. Features of logging and displaying battery voltage readings is neither described nor suggested by the references of record. Accordingly, the subject matter of claim 47 is further distinguished from the references of record.

Support for the amendments to claim 18 and for new claims 45-47 is found in the original patent specification, for example, but not limited to, paragraphs 45-52, 75, 76, 81, and 403. Accordingly, no new matter has been added to the specification, by those claim amendments and new claims.

In view of the following it is respectfully submitted that the present application, as amended, is in condition for allowance, and allowance of the claims at an early date is respectfully requested.

Applicant respectfully requests that the foregoing amendments be made prior to examination of the present application.

Applicant believes that the present application is now in condition for allowance. Favorable consideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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